UNITED STATES PATENT AND TRADEMARK OFFICE

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10/525,144	10/13/2005	Hong Wang	678-1882	5612

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/525,144	WANG ET AL.
	Examiner	Art Unit	
	Dominic E. Rego	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>26 October 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>14-26</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>14-17, 19-26</u> is/are rejected.

7) ☒ Claim(s) <u>18</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All   b) ☐ Some *   c) ☐ None of:

       1. ☒ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/26/2007 has been entered.

Claim Objections

2.   Claim 14 is objected to because of the following informalities: Claim 14, line 10,

Applicant recites limitation "an MBMS" which should be --a MBMS--. Similar mistakes

are found in claim 19, line 2; Claim 21, line 4 and 10; Claim 23, line 11; Claim 24, line 2;

Claim 25, page 5, line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 14-17 and 19-26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rune et al. (US Patent Application Publication #2002/0025815) in

view of Sarkkinen et al. (US Patent #6,701,155).

Regarding claim 14, Rune teaches a channel type switching method (Abstract) for a Multimedia Broadcast and Multicast service (MBMS) *(Paragraph 0043)* Point to Point (P-t-P) *(dedicated channel)* and Point to Multi Point (P-t-M) channel *(common channel)*, when a UE having MBMS service moves to a cell in a Destination Radio Network Controller (DRNC) (Paragraphs 0047 and 0049) that has an Iur interface with a Serving Radio Network Controller (SRNC) (Figure 1A, Iur interface between elements SRNC and drift-RNC), comprising the steps of:

determining in the DRNC, to perform switching channel type between the P-t-M channel *(common channel)* and the P-t-P *(dedicated channel)* *(Paragraphs 0055- 0061, especially paragraph 0059, lines 1-10, Rune teaches when the request message 3-1 is received at DRNC 26(2), resource allocation process 90 perform step 90-2 which means determining in the DRNC, and sending the requested channel switching-related information to SRNC in the form of response message 3-2)*;

notifying the SRNC of the determined MBMS channel type from the DRNC *(Paragraphs 0055- 0061, especially paragraph 0059, lines 1-10, Rune teaches when the request message 3-1 is received at DRNC 26(2), resource allocation process 90 perform step 90-2 which means determining in the DRNC, and sending the requested channel switching-related information to SRNC in the form of response message 3-2)*;

notifying in the SRNC, the UE to reconfigure an MBMS channel via a Radio Resource Control (RCC) message in order to perform channel type switching to the determined MBMS channel type *(P-t-P or dedicated channel and P-t-M or common channel) (Paragraph 0051)*; and

transmitting MBMS data with the determined channel type to UEs requiting

MBMS service (Paragraphs 0061 and 0062), except to perform switching channel type

between the P-t-M channel and the P-t-P channel based on a number of users having

the MBMS service in the cell.

However, in related art, Sarkkinen teaches to perform switching channel type

between the P-t-M channel and the P-t-P channel based on a number of users having

the MBMS service in the cell *(Col 5, line 60-Col 6, line 19; Col 8, line 58-Col 9, line 31).*

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to provide the above teaching of Sarkkinen to Rune in order to

efficiently serve the multicast service to the users by P-t-P connection or by a P-t-M

connection (Sarkkinen, Col 6, lines 9-11).

Regarding claim 15, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 14. In addition, Sarkkinen teaches the method, wherein said

channel switching is at least determined based on comparing a number of UEs requiting

MBMS service to a threshold *(Col 5, line 60-Col 6, line 19; Col 8, line 58-Col 9, line 31).*

Regarding claim 16, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 14. In addition, both, Rune and Sarkkinen, teach the method,

wherein said channel switching further comprises: the SRNC transmitting a radio link

setup request message to the DRNC including at least one MBMS service identifier

(See Rune, Paragraphs 0025 and 0061 and Sarkkinen, *Col 5, line 60-Col 6, line 19; Col*

8, line 58-Col 9, line 31).

Regarding claim 17, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 14. In addition, Rune teaches the method, wherein said

channel switching further comprises:

sending, by the SRNC, a radio link setup request message to the DRNC to

request a radio link setup (Paragraph 0061);

determining, by the DRNC, channel type at least based on a number of UEs that

require MBMS service and informing the SRNC of the channel type (Paragraphs 0055,

0059 and see Sarkkinen, *Col 5, line 60-Col 6, line 19; Col 8, line 58-Col 9, line 31*).

Regarding claim 19, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 16. In addition, Sarkkinen teaches the method, wherein said

message transferred from the SRNC to the DRNC comprises an MBMS service

identifier, which enables the DRNC to count a number of MBMS users (*Col 5, line 60-*

Col 6, line 19; Col 8, line 58-Col 9, line 31).

Regarding claim 20, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 16. In addition, Sarkkinen teaches the method, wherein, if the

UE is first in requesting MBMS service in the DRNC, the DRNC sets up a radio access

bearer (RAB) connection with a core network *(Col 3, line 44-67 and Col 7, line 48-Col*

8, line 48).

Regarding claim 21, Rune teaches a channel type switching method (Abstract)

for a Multimedia Broadcast and Multicast Service (MBMS) *(Paragraph 0043)* Point to

Point (P-t-P) *(dedicated channel)* and Point to Multi Point (P-t-M) channel *(common*

channel) in a radio network Controller (Paragraphs 0047 and 0049), comprising:

reporting change of the MBMS channel type to a serving radio network

controller (SRNC) *(Paragraphs 0055- 0061, especially paragraph 0059, lines 1-10,*

Rune teaches when the request message 3-1 is received at DRNC 26(2), resource

allocation process 90 perform step 90-2 which means determining in the DRNC, and

sending the requested channel switching-related information to SRNC in the form of

response message 3-2); and

receiving in the SRNC, the MBMS channel type from a Destination Radio

Network Controller (DRNC) *(Paragraphs 0055- 0061, especially paragraph 0059, lines*

1-10, Rune teaches when the request message 3-1 is received at DRNC 26(2),

resource allocation process 90 perform step 90-2 which means determining in the

DRNC, and sending the requested channel switching-related information to SRNC in

the form of response message 3-2), and notifying in the SRNC, the UE to reconfigure

an MBMS channel via a Radio Resource Control (RRC) message in order to perform

channel type switching to the MBMS channel type *(P-t-P or dedicated channel and P-t-*

M or common channel) (Paragraph 0051), except for checking a number of User

Equipments (UEs) in a cell to determine an MBMS channel type;

determining the MBMS channel type by comparing the number of UEs that

require MBMS service to a threshold.

However, in related art, Sarkkinen teaches checking a number of User

Equipments (UEs) in a cell to determine an MBMS channel type *(Col 5, line 60-Col 6,*

line 19; Col 8, line 58-Col 9, line 31);

determining the MBMS channel type by comparing the number of UEs that require MBMS service to a threshold *(Col 5, line 60-Col 6, line 19; Col 8, line 58-Col 9, line 31)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Sarkkinen to Rune in order to efficiently serve the multicast service to the users by P-t-P connection or by a P-t-M connection (Sarkkinen, Col 6, lines 9-11).

Regarding claim 22, Rune teaches the method, further comprising:

receiving, at the SRNC, the MBMS channel type *(either dedicated channel (P-t-P) or common channel (P-t-M))* from a destination radio network controller (DRNC) *(Paragraphs 0059, 0061 and 0062, especially paragraph 0059, lines 1-10, Rune teaches when the request message 3-1 is received at DRNC 26(2), resource allocation process 90 perform step 90-2 which means determining in the DRNC, and sending the requested channel switching-related information to SRNC in the form of response message 3-2)*; and

transmitting a channel reconfiguration request message to the UE *(Paragraph 0061 and 0062)*.

Regarding claim 23, Rune teaches a channel type switching method (Abstract) for a Multimedia Broadcast and Multicast Service (MBMS) *(Paragraph 0043)* Point to Point (P-t-P) *(dedicated channel)* and Point to Multi Point (P-t-M) channel *(common channel)*, comprising the steps of:

transmitting, from a Serving Radio Network Controller (SRNC), a radio link setup

message to a Destination Radio Network Controller (DRNC) (Paragraph 0058);

transmitting from the DRNC, an MBMS channel type *(dedicated channel (P-t-P)*

or common channel (P-t-M)) to the SRNC upon receiving the radio link setup message

in the DRNC *(Paragraphs 0055- 0061, especially paragraph 0059, lines 1-10, Rune*

teaches when the request message 3-1 is received at DRNC 26(2), resource allocation

process 90 perform step 90-2 which means determining in the DRNC, and sending the

requested channel switching-related information to SRNC in the form of response

message 3-2);

notifying, at the SRNC, a User Equipment (UE) that requires MBMS service to

reconfigure the MBMS channel type via a Radio Resource Control (RRC) message

(dedicated channel (P-t-P) and common channel (P-t-M)) (Paragraph 0051), except

receiving, at the UE, the MBMS channel type; and

receiving MBMS data on an MBMS channel using the MBMS channel type,

wherein the MBMS channel type is one of the P-t-P channel or the P-t-M channel.

However, in related art, Sarkkinen teaches receiving, at the UE, the MBMS

channel type; and receiving MBMS data on an MBMS channel using the MBMS channel

type, wherein the MBMS channel type is one of the P-t-P channel or the P-t-M channel

(Col 5, line 60-Col 6, line 19; Col 8, line 58-Col 9, line 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to provide the above teaching of Sarkkinen to Rune in order to

efficiently serve the multicast service to the users by P-t-P connection or by a P-t-M

connection (Sarkkinen, Col 6, lines 9-11).

Regarding claim 24, the combination of Rune and Sarkkinen teach all the

claimed elements in claim 23. In addition, Sarkkinen teaches the method, wherein the

radio link setup message comprises an MBMS service identifier *(Col 5, line 60-Col 6,*

line 19; Col 8, line 58-Col 9, line 31).

Regarding claim 25, Rune teaches a data communication channel

establishment method for setting up multimedia broadcast/multicast service (MBMS)

(Paragraph 0043) with a core network (CN) (Figure 1B, element 16) via a destination

radio network controller (DRNC) *(Figure 1B, element 26(2))* , when a UE moves to a cell

controlled by the DRNC *(Figure 1B, when a UE 30 moves to a cell from 28(1-1) to 28*

(2-2) controlled by the DRNC 26 (2)), comprising the steps of:

a serving radio network controller (SRNC) sending a common transport channel

resource request message to the DRNC (Paragraphs

0025,0026,0037,0051,0068,0069), except for the DRNC sending an MBMS service

request message to the CN; the CN requesting to set up a data connection with the

DRNC; and the DRNC sending a response message to the CN.

However, in related art, Sarkkinen teaches the DRNC sending an MBMS service

request message to the CN; the CN requesting to set up a data connection with the

DRNC; and the DRNC sending a response message to the CN (Col 5, line 50-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Sarkkinen to Rune in order to receive mbms service.

Regarding claim 26, the combination of Rune and Sarkkinen teach all the claimed elements in claim 25. In addition, Sarkkinen teaches the method, wherein the step of sending the common transport channel resource request messages further comprises sending a MBMS service identifier (Col 5, lines 18-27).

Allowable Subject Matter

5.   Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 18, the prior art of record fail to teach the method, wherein said channel switching further comprises:

the SRNC sending a message to inquire about MBMS service type from the DRNC;

the DRNC determining a channel type to be set up and informing the SRNC of the parameters of MBMS channel set up; and

the SRNC completing setting up P-t-P   channel   or   obtaining   P-t-M channel information from the DRNC.

Response to Arguments

6.   Applicant's arguments with respect to claims 14-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dominic E. Rego whose telephone number is 571-272-

8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew Anderson can be reached on 571-272-4177. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

        Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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                                                    MATTHEW ANDERSON
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